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**Department of Defense  
Fiscal Year (FY) 2016 President's Budget Submission**

February 2015



**Office of the Secretary Of Defense**

*Defense Wide Justification Book Volume 1 of 1*

***Defense Production Act Purchases***

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Office of the Secretary Of Defense • President's Budget Submission FY 2016 • Procurement

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Defense-Wide  
 FY 2016 President's Budget  
 Exhibit P-1 FY 2016 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

23 Jan 2015

Appropriation -----	FY 2014 (Base & OCO) -----	FY 2015 Base Enacted -----	FY 2015 OCO Enacted -----	FY 2015 Total Enacted -----
Defense Production Act Purchases	105,135	51,638		51,638
Total Defense-Wide	105,135	51,638		51,638

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Defense-Wide  
FY 2016 President's Budget  
Exhibit P-1 FY 2016 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

23 Jan 2015

Appropriation -----	FY 2016 Base -----	FY 2016 OCO -----	FY 2016 Total -----
Defense Production Act Purchases	46,680		46,680
Total Defense-Wide	46,680		46,680



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Defense-Wide  
FY 2016 President's Budget  
Exhibit P-1 FY 2016 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

23 Jan 2015

Appropriation: Defense Production Act Purchases

Budget Activity -----	FY 2014 (Base & OCO) -----	FY 2015 Base Enacted -----	FY 2015 OCO Enacted -----	FY 2015 Total Enacted -----
01. Defense Production Act Purchases	105,135	51,638		51,638
Total Defense Production Act Purchases	105,135	51,638		51,638

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Defense-Wide  
FY 2016 President's Budget  
Exhibit P-1 FY 2016 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

23 Jan 2015

Appropriation: Defense Production Act Purchases

Budget Activity -----	FY 2016 Base -----	FY 2016 OCO -----	FY 2016 Total -----
01. Defense Production Act Purchases	46,680		46,680
Total Defense Production Act Purchases	46,680		46,680

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Defense-Wide  
 FY 2016 President's Budget  
 Exhibit P-1 FY 2016 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

23 Jan 2015

Appropriation: 0360D Defense Production Act Purchases

Line No	Item Nomenclature	Ident Code	FY 2014 (Base & OCO)		FY 2015 Base Enacted		FY 2015 OCO Enacted		FY 2015 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Defense Production Act Purchases											
-----											
Defense Production Act Purchases											
1	Defense Production Act Purchases	A	105,135		51,638				51,638		U
			-----		-----		-----		-----		
Total Defense Production Act Purchases			105,135		51,638				51,638		
			-----		-----		-----		-----		
Total Defense Production Act Purchases			105,135		51,638				51,638		

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Defense-Wide  
 FY 2016 President's Budget  
 Exhibit P-1 FY 2016 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

23 Jan 2015

Appropriation: 0360D Defense Production Act Purchases

Line No	Item Nomenclature	Ident Code	FY 2016 Base		FY 2016 OCO		FY 2016 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Defense Production Act Purchases									
-----									
Defense Production Act Purchases									
1	Defense Production Act Purchases	A		46,680			46,680		U
			-----	-----	-----		-----		
Total Defense Production Act Purchases				46,680			46,680		
			-----	-----	-----		-----		
Total Defense Production Act Purchases				46,680			46,680		

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**Line Item Table of Contents (by Appropriation then Line Number)**

***Appropriation 0360D: Defense Production Act Purchases***

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<b>Line #</b>	<b>BA</b>	<b>BSA</b>	<b>Line Item Number</b>	<b>Line Item Title</b>	<b>Page</b>
1	01	10	TitleIII	Defense Production Act Purchases.....	Volume 1 - 1

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**Line Item Table of Contents (Alphabetically by Line Item Title)**

<b>Line Item Title</b>	<b>Line Item Number</b>	<b>Line #</b>	<b>BA</b>	<b>BSA</b>	<b>Page</b>
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**Exhibit P-40, Budget Line Item Justification:** PB 2016 Office of the Secretary Of Defense **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases	<b>P-1 Line Item Number / Title:</b> TitleIII / Defense Production Act Purchases
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>Program Elements for Code B Items:</b> 0902199D8Z	<b>Other Related Program Elements:</b>
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Resource Summary	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1,396.975	105.135	51.638	46.680	-	46.680	20.209	19.260	20.821	21.105	Continuing	Continuing
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P1) <i>(\$ in Millions)</i>	1,396.975	105.135	51.638	46.680	-	46.680	20.209	19.260	20.821	21.105	Continuing	Continuing
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>1,396.975</b>	<b>105.135</b>	<b>51.638</b>	<b>46.680</b>	<b>-</b>	<b>46.680</b>	<b>20.209</b>	<b>19.260</b>	<b>20.821</b>	<b>21.105</b>	<b>Continuing</b>	<b>Continuing</b>

*(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)*

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Title III of the Defense Production Act (DPA) provides the Department of Defense (DoD) with a powerful tool to ensure the timely creation and availability of domestic production capabilities for technologies that have the potential for wide-ranging impact on the operational capabilities and technological superiority of U.S. defense systems. DPA Title III is unique in that it is the sole DoD program focused on creating, maintaining, protecting, expanding or restoring domestic production capacity to strengthen domestic industry and to establish the industrial base capacity for essential national defense capabilities.

The Defense Production Act is authorized by 50 U.S.C. App. 2061 et seq. This budget includes essential transformational initiatives using the authorities of Title III of the DPA. FY 2016 requested funding will be used for continuation of four projects and two new projects. These are multi-year projects that will incentivize domestic sources to establish, strengthen, and expand domestic industrial base capabilities for key technologies that support transformational initiatives and maintain the technological superiority of U.S. defense systems. Brief descriptions of these projects are provided below.

In accordance with the provisions of the Defense Production Act of 1950, as amended, (50 U.S.C. App. 2061 et seq.), notification to Congress of the intent of the DoD to execute any of the projects described in this exhibit to correct domestic industrial base shortfalls for technologies and/or materials essential for the execution of the national security strategy of the United States will be provided via letter notification before the referenced projects are initiated.

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**Exhibit P-40, Budget Line Item Justification:** PB 2016 Office of the Secretary Of Defense **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases	<b>P-1 Line Item Number / Title:</b> TitleIII / Defense Production Act Purchases
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ID Code (A=Service Ready, B=Not Service Ready) :			Program Elements for Code B Items: 0902199D8Z			Other Related Program Elements:		
Exhibits Schedule			Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title*	Exhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
1 / Defense Production Act Purchases	P-5		- / 1,396.975	- / 105.135	- / 51.638	- / 46.680	- / -	- / 46.680
<b>Total Gross/Weapon System Cost</b>			<b>- / 1,396.975</b>	<b>- / 105.135</b>	<b>- / 51.638</b>	<b>- / 46.680</b>	<b>- / -</b>	<b>- / 46.680</b>
Exhibits Schedule			FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Title*	Exhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
1 / Defense Production Act Purchases	P-5		- / 20.209	- / 19.260	- / 20.821	- / 21.105	Continuing	Continuing
<b>Total Gross/Weapon System Cost</b>			<b>- / 20.209</b>	<b>- / 19.260</b>	<b>- / 20.821</b>	<b>- / 21.105</b>	<b>Continuing</b>	<b>Continuing</b>

\*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.  
 Note: Totals in this Exhibit P-40 set may not be exact or add due to rounding.

**Justification:**  
 FY 2016 resources (\$M):

The projects to be executed within FY 2016 resources are identified below. The multi-year cost phasing of each of these projects is addressed in the P5 exhibit. The first three projects listed are part of the National Security Space (NSS) Industrial and Supply Base (ISB) Risk Mitigation Program described below.

- (1) NSS ISB: Next Generation Star Tracker System \$12.05
- (2) NSS ISB: Cadmium Zinc Telluride Substrates \$0.452
- (3) NSS ISB: Space Electronics and Materials Investments \$21.0 (new project in FY 2016)
- (4) Submarine Valve-Regulated Lead Acid Batteries \$3.0
- (5) 3D Microelectronics for Anti-Tamper \$2.911
- (6) Secure Composite Shipping Containers \$7.267 (new project in FY 2016)

The NSS ISB Risk Mitigation Program was developed by the DoD to formulate a systematic process to fund mitigation efforts to rectify shortcomings in the space industrial and supply base. The objective is to ensure access to critical technologies and capabilities in the quality, quantity, and timeframes required to support U.S. Government space programs. Projects in this program are addressing cross-platform, multi-agency/Service requirements using the authorities of DPA Title III. Seven NSS ISB multi-year project technologies have been identified for funding, with execution profiles as displayed in the P5 from prior years through FY 2016. The Space Electronics and Materials Investments project is a new NSS ISB project programmed to begin in FY 2016.

FY 2015 resources (\$M):

FY 2015 adjustments:  
 \$ 21.638 FY 2015 request  
 + 30.000 Congressional increase  
 \$ 51.638 Appropriated

FY 2015 Congressional Add projects:  
 (1) NSS ISB: Next Generation Star Tracker System \$2.075, supplemented with baseline funding for a project total of \$6.380 FY 2015

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2016 Office of the Secretary Of Defense		<b>Date:</b> February 2015
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases		<b>P-1 Line Item Number / Title:</b> TitleIII / Defense Production Act Purchases
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>Program Elements for Code B Items:</b> 0902199D8Z	<b>Other Related Program Elements:</b>
<p>(2) Activated Carbon Capacity Expansion \$5.652, supplemented with baseline funding for a project total of \$10.865 in FY 2015                  (3) 3D Microelectronics for Anti-Tamper \$4.0                  (4) Thin Wall Castings for Military Applications \$18.273</p> <p>Seven additional projects to be executed within FY 2015 resources are identified below. The multi-year cost phasing of each of these projects is addressed in the P5 exhibit. The first five of these projects, continuing from prior years, are part of the National Security Space (NSS) Industrial and Supply Base (ISB) Risk Mitigation Program described above.                  (1) NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability \$2.639                  (2) NSS ISB: Space Qualified Solar Cell Supply Chain \$1.5                  (3) NSS ISB: Complementary Metal Oxide Semiconductor (CMOS) Focal Plane Arrays (FPA) for Visible Sensors for Star Trackers \$1.69                  (4) NSS ISB: Cadmium Zinc Telluride Substrates \$1.591                  (5) NSS ISB: Additive Manufacturing for Liquid Rocket Engines \$0.7                  (6) Modernization of Steel Plate Production \$2.0                  (7) Scale Up of Green Energetics \$2.0</p> <p>The Transparent Ceramics Initiative project previously planned for FY 2015 execution was cancelled and no budgeted funding was obligated. Extensive market research, coupled with review of government requirements, did not support project execution.</p> <p>FY 2014 resources (\$M):</p> <p>FY 2014 adjustments:                  \$ 25.135 FY 2014 request                  + 35.000 Congressional increase                  + 45.000 Transfer from Department of Energy for the Advanced Drop-In Biofuel Production Project                  \$105.135 Appropriated</p> <p>FY 2014 Congressional Add projects:                  (1) Modernization of Steel Plate Production \$18.0                  (2) Activated Carbon Capacity Expansion \$15.5, supplemented with baseline funding for a project total of \$24.135 in FY 2014                  (3) Advanced Carbon Nanotube Volume Production Facility \$1.5</p> <p>FY 2014 other projects are identified below. The multi-year cost phasing of each of these projects is addressed in the P5 exhibit. Four of these projects, continuing from prior years, are part of the National Security Space (NSS) and Industrial Supply Base (ISB) Risk Mitigation Program.                  (1) NSS ISB: Next Generation Star Tracker System \$4.22                  (2) NSS ISB: Space Qualified Solar Cell Supply Chain \$0.947                  (3) NSS ISB: Cadmium Zinc Telluride Substrates \$4.633                  (4) NSS ISB: Additive Manufacturing for Liquid Rocket Engines \$4.7                  (5) Advanced Carbon Nanotube Volume Production Facility \$1.5                  (6) Modernization of Steel Plate Production \$18.0                  (7) Activated Carbon Capacity Expansion \$24.135                  (8) Scale Up of Green Energetics \$2.0                  (9) Advanced Drop-In Biofuel Production Project \$45.0</p>		

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**Exhibit P-5, Cost Analysis: PB 2016 Office of the Secretary Of Defense** **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D / 01 / 10	<b>P-1 Line Item Number / Title:</b> TitleIII / Defense Production Act Purchases	<b>Item Number / Title [DODIC]:</b> 1 / Defense Production Act Purchases
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,396.975	105.135	51.638	46.680	-	46.680	20.209	19.260	20.821	21.105	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P1) ( <i>\$ in Millions</i> )	1,396.975	105.135	51.638	46.680	-	46.680	20.209	19.260	20.821	21.105	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,396.975</b>	<b>105.135</b>	<b>51.638</b>	<b>46.680</b>	-	<b>46.680</b>	<b>20.209</b>	<b>19.260</b>	<b>20.821</b>	<b>21.105</b>	<b>Continuing</b>	<b>Continuing</b>

*(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)*

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or add, due to rounding.

Cost Elements	Prior Years			FY 2014			FY 2015			FY 2016 Base			FY 2016 OCO			FY 2016 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)

Hardware - National Security Space (NSS) Industrial & Supply Base (ISB) Risk Mitigation Program Cost																		
Non Recurring Cost																		
NSS ISB: Next Generation Star Trackers	-	-	0.500	-	-	4.220	-	-	6.380	-	-	12.050	-	-	-	-	-	12.050
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability	-	-	7.564	-	-	-	-	-	2.639	-	-	-	-	-	-	-	-	-
NSS ISB: Space Qualified Solar Cell Supply Chain	-	-	6.180	-	-	0.947	-	-	1.500	-	-	-	-	-	-	-	-	-
NSS ISB: Comp Metal Oxide Semiconductor Focal Plane Arrays for Visible Sensors for Star Trackers	-	-	9.416	-	-	-	-	-	1.690	-	-	-	-	-	-	-	-	-
NSS ISB: Additive Manufacturing for Liquid Rocket Engines	-	-	1.300	-	-	4.700	-	-	0.700	-	-	-	-	-	-	-	-	-
NSS ISB: Cadmium Zinc Telluride Substrates	-	-	-	-	-	4.633	-	-	1.591	-	-	0.452	-	-	-	-	-	0.452
NSS ISB: Space Electronics and Materials Investments	-	-	-	-	-	-	-	-	-	-	-	21.000	-	-	-	-	-	21.000

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<b>Exhibit P-5, Cost Analysis: PB 2016 Office of the Secretary Of Defense</b>		<b>Date:</b> February 2015
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D / 01 / 10	<b>P-1 Line Item Number / Title:</b> TitleIII / Defense Production Act Purchases	<b>Item Number / Title [DODIC]:</b> 1 / Defense Production Act Purchases

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or add, due to rounding.

Cost Elements	Prior Years			FY 2014			FY 2015			FY 2016 Base			FY 2016 OCO			FY 2016 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Non Recurring Cost</i>	-	-	24.960	-	-	14.500	-	-	14.500	-	-	33.502	-	-	-	-	-	33.502
<i>Subtotal: Hardware - National Security Space (NSS) Industrial &amp; Supply Base (ISB) Risk Mitigation Program Cost</i>	-	-	24.960	-	-	14.500	-	-	14.500	-	-	33.502	-	-	-	-	-	33.502
Hardware - Other Cost																		
Non Recurring Cost																		
Activated Carbon Capacity Expansion	-	-	5.000	-	-	24.135	-	-	10.865	-	-	-	-	-	-	-	-	-
Modernization of Steel Plate Production	-	-	-	-	-	18.000	-	-	2.000	-	-	-	-	-	-	-	-	-
Scale Up of Green Energetics	-	-	-	-	-	2.000	-	-	2.000	-	-	-	-	-	-	-	-	-
Submarine Valve-Regulated Lead Acid Batteries	-	-	22.000	-	-	-	-	-	-	-	-	3.000	-	-	-	-	-	3.000
Secure Composite Shipping Containers	-	-	-	-	-	-	-	-	-	-	-	7.267	-	-	-	-	-	7.267
High Temperature Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Metal Structural Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3D Microelectronics for Anti-Tamper	-	-	15.000	-	-	-	-	-	4.000	-	-	2.911	-	-	-	-	-	2.911
Advanced Carbon Nanotube Volume Production Facility	-	-	21.000	-	-	1.500	-	-	-	-	-	-	-	-	-	-	-	-
Advanced Drop-In Biofuel Production	-	-	160.000	-	-	45.000	-	-	-	-	-	-	-	-	-	-	-	-
Thin Wall Castings for Military Applications	-	-	-	-	-	-	-	-	18.273	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	223.000	-	-	90.635	-	-	37.138	-	-	13.178	-	-	-	-	-	13.178
<i>Subtotal: Hardware - Other Cost</i>	-	-	223.000	-	-	90.635	-	-	37.138	-	-	13.178	-	-	-	-	-	13.178
<b>Gross/Weapon System Cost</b>	-	-	<b>1,396.975</b>	-	-	<b>105.135</b>	-	-	<b>51.638</b>	-	-	<b>46.680</b>	-	-	-	-	-	<b>46.680</b>

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Exhibit P-5, Cost Analysis: PB 2016 Office of the Secretary Of Defense														Date: February 2015				
Appropriation / Budget Activity / Budget Sub Activity:						P-1 Line Item Number / Title:						Item Number / Title [DODIC]:						
0360D / 01 / 10						TitleIII / Defense Production Act Purchases						1 / Defense Production Act Purchases						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Cost Elements	FY 2017			FY 2018			FY 2019			FY 2020			To Complete			Total Cost		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - National Security Space (NSS) Industrial & Supply Base (ISB) Risk Mitigation Program Cost																		
Non Recurring Cost																		
NSS ISB: Next Generation Star Trackers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.150
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.203
NSS ISB: Space Qualified Solar Cell Supply Chain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.627
NSS ISB: Comp Metal Oxide Semiconductor Focal Plane Arrays for Visible Sensors for Star Trackers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.106
NSS ISB: Additive Manufacturing for Liquid Rocket Engines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.700
NSS ISB: Cadmium Zinc Telluride Substrates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.676
NSS ISB: Space Electronics and Materials Investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.000
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87.462
<i>Subtotal: Hardware - National Security Space (NSS) Industrial &amp; Supply Base (ISB) Risk Mitigation Program Cost</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87.462
Hardware - Other Cost																		
Non Recurring Cost																		
Activated Carbon Capacity Expansion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40.000
Modernization of Steel Plate Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.000
Scale Up of Green Energetics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.000
Submarine Valve-Regulated Lead Acid Batteries	-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27.000

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**Exhibit P-5, Cost Analysis: PB 2016 Office of the Secretary Of Defense** **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D / 01 / 10	<b>P-1 Line Item Number / Title:</b> TitleIII / Defense Production Act Purchases	<b>Item Number / Title [DODIC]:</b> 1 / Defense Production Act Purchases
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Cost Elements	FY 2017			FY 2018			FY 2019			FY 2020			To Complete			Total Cost		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Secure Composite Shipping Containers	-	-	8.445	-	-	1.090	-	-	-	-	-	-	-	-	-	-	-	16.802
High Temperature Material	-	-	1.402	-	-	7.931	-	-	9.916	-	-	8.713	Continuing			Continuing		
Non-Metal Structural Materials	-	-	-	-	-	5.512	-	-	10.905	-	-	12.392	Continuing			Continuing		
3D Microelectronics for Anti-Tamper	-	-	8.362	-	-	4.727	-	-	-	-	-	-	-	-	-	-	-	35.000
Advanced Carbon Nanotube Volume Production Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.500
Advanced Drop-In Biofuel Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	205.000
Thin Wall Castings for Military Applications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.273
<i>Subtotal: Non Recurring Cost</i>	-	-	20.209	-	-	19.260	-	-	20.821	-	-	21.105	Continuing			Continuing		
<i>Subtotal: Hardware - Other Cost</i>	-	-	20.209	-	-	19.260	-	-	20.821	-	-	21.105	Continuing			Continuing		
<b>Gross/Weapon System Cost</b>	-	-	<b>20.209</b>	-	-	<b>19.260</b>	-	-	<b>20.821</b>	-	-	<b>21.105</b>	<b>Continuing</b>			<b>Continuing</b>		

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